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(54) **LOW COMPLEXITY METHOD FOR REDUCING PAPR IN FRFT-OFDM SYSTEMS**

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(57) **ABSTRACT**

The invention relates to a method for reducing the PAPR in FRFT-OFDM systems, which belongs to the field of broadband wireless digital communications technology. The method is based on fractional random phase sequence and fractional circular convolution theorem, which can effectively reduce the PAPR of the system. The method of the invention has the advantages of simple system implementation and low computational complexity. In this method, the PAPR of the system can be effectively reduced while maintaining the reliability of the system. When the number of candidate signals is the same, the PAPR performance of the present method was found to be almost the same as that of SLM and better than that of PTS. More importantly, the present method has lower computational complexity than that of SLM and PTS methods.